

Contribution to the Revision of the Palaearctic Lauxaniidae (Diptera)

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Abstract — The Palaearctic species of the family *Lauxaniidae* are partly revised. The revised lists of the species of genera *Homoneura* V. D. WULP, *Minettia* ROB.-DESV. and *Calliopum* STRAND are given. Two new subgenera (*Schumannimyia* subg. n. of *Sapromyza* and *Callixania* sub. n. of *Lauxania*) and ten new species (*Homoneura maghrebi* sp. n., *H. remmi* sp. n., *H. shewelliana* sp. n., *H. subnotata* sp. n., *H. thalhammeri* sp. n., *H. tunisica* sp. n., *Lyciella mihalyii* sp. n., *L. stylata* sp. n., *L. subpallidiventris* sp. n. and *Calliopum splendidum* sp. n.) are described. Ten species are synonymized and further three possible synonyms are suggested. With 42 figures.

The family *Lauxaniidae* is one of the least studied groups of flies. One of the first more comprehensive works on the Palaearctic species is the contribution of BECKER (1895). BECKER in this work described numerous new species since he knew very brief, sometimes almost useless descriptions of earlier species. He entirely disregarded the characteristics of the genital organs so much so that he apparently did not know the structure of the post-abdomen of males and females. Consequently, in many instances he determined the sex of the specimens wrongly. As a specific difference he frequently used features of variable morphological character, thus, in several cases he described the very same species as being new (see below). Later on, in other contributions (BECKER 1907, etc.) he described several new species.

The *Lauxaniidae* of the Carpathian Basin were comprehensively treated first by THALHAMMER (1899) in the Fauna Regni Hungariae. The specimens referred to may even be studied today, unfortunately, most of them proved to be wrong identifications. I may also venture to say that his determinations should entirely be disregarded. The first profound work on the *Lauxaniidae* of the Carpathian Basin was written by KERTÉSZ (1921); he was a keen-eyed expert, well versed in the literature; unfortunately, according to contemporary custom he did not study types, thus, he misinterpreted a few species.

The respective part of the "Die Fliegen der palaearktischen Region" was written by CZERNY (1932). From such a monograph one surely would have expected to check the accumulated data and to make a reliable synthesis. But we must establish here that CZERNY contributed the worst part of the monograph series, thus making matters even worse in the taxonomy of *Lauxaniidae*. Let us illustrate the situation with a few examples. He discussed 168 species in his work, of which about 1/3, to be exact 50 species, he had never seen (!); he misidentified 6 species; he examined 8 species which had not been determined by the original author; he described 35 new species. Consequently, with due regard to our predecessors, we may suppose that he knew 69 species at the best. Thus, it is not surprising that the species of BECKER and CZERNY gradually become synonyms.

Following the work of CZERNY, SZILÁDY (1941) newly elaborated the *Lauxaniidae* fauna of the Carpathian Basin. The perfunctoriness of the latter author is comparable only with CZERNY's. Since all the specimens determined and labelled by SZILÁDY are still found in the Hungarian Natural History Museum, they may be checked that out of his 74 species he misidentified 28, of course, the proportion of wrongly identified specimens is even higher

when we consider the identified but unlabelled specimens. In several cases he even misidentified the genus; and I established that about a dozen of the species was identified well, i.e. all the specimens belonged to the one and the same species.

On the other hand, the work of COLLIN (1948), a brief monograph on the *Lauxaniidae* of the British Isles is a very reliable contribution to the knowledge of this group. COLLIN elucidated several taxonomically dubious points. Unfortunately, the Lauxaniide fauna of the British Isles is comparatively poor especially when we consider the southern territories of the Palaearctic region. HENNIG (1948, 1951) described a number of species and revised some from the Old World on the basis of the male genitalia. Recently, MARTINEK (1974, etc.) published several papers on the *Lauxaniidae* of Czechoslovakia. Remm (1972, 1974) published a number of faunistic papers on the *Lauxaniidae* of the Baltic Soviet Republics, while recently (1978) she described several new species on the basis of male and female genital organs, synonymizing at the same time some of the species of CZERNY on the basis of the same. Thus, it seems high time to make a comprehensive revision of the Palaearctic *Lauxaniidae*.

The present author started to study this group of flies over 18 months ago by examining the type-material of the following museums: Museum für Naturkunde, Zoologisches Museum the type-material of the following museums: Museum für Naturkunde, Zoologisches Museum, Berlin; Naturhistorisches Museum, Vienna; Zoological Institute of the Academy of Sciences of the USSR, Leningrad; Hungarian Natural History Museum, Budapest. The general governing principle was to examine the genital apparatus of the types but other morphological features were also freely used. The new species described in the following and the already known ones will yield about 150–160 species in the Palaearctic region. Of this number only about 45–50 are easily recognizable, and previous authors applied the names consequently. This work subscribes to the validity of 45 species, 10 are synonymized with certainty, a further number becomes ambiguous, while the names of a few species should be discarded since they are unrecognizable. A further 38 species await revision, thus, this work is far from being complete.

The more important results of the work obtained so far are discussed in rather an arbitrary order, since we must remember that relationships among the known genera, let alone phylogenetical trends are very inadequately known.

Here I should like to thank the following persons who were kind enough to lend me type-specimens indispensable for any kind of revisionary work: DR. HUBERT SCHUMANN (Berlin), DR. RUTH LICHTENBERG (Vienna) and DR. EMILIA P. NARTSHUK (Leningrad). I would especially like to thank Mrs. EVI REMM. (Eesti NSV Teaduste Akadeemia, Zoologia ja Botanika Instituut, Tartu) for her invaluable help.

Homoneura v. D. WULP, 1891

MINOR species-group

(*christophi* BECK., *dentiventris* CZERNY, *lasdini* CZERNY, *minor* BECK., *rectangulata* CZERNY, *remmi* sp. n. *shewelliana* sp. n., *tesquae* BECK.)

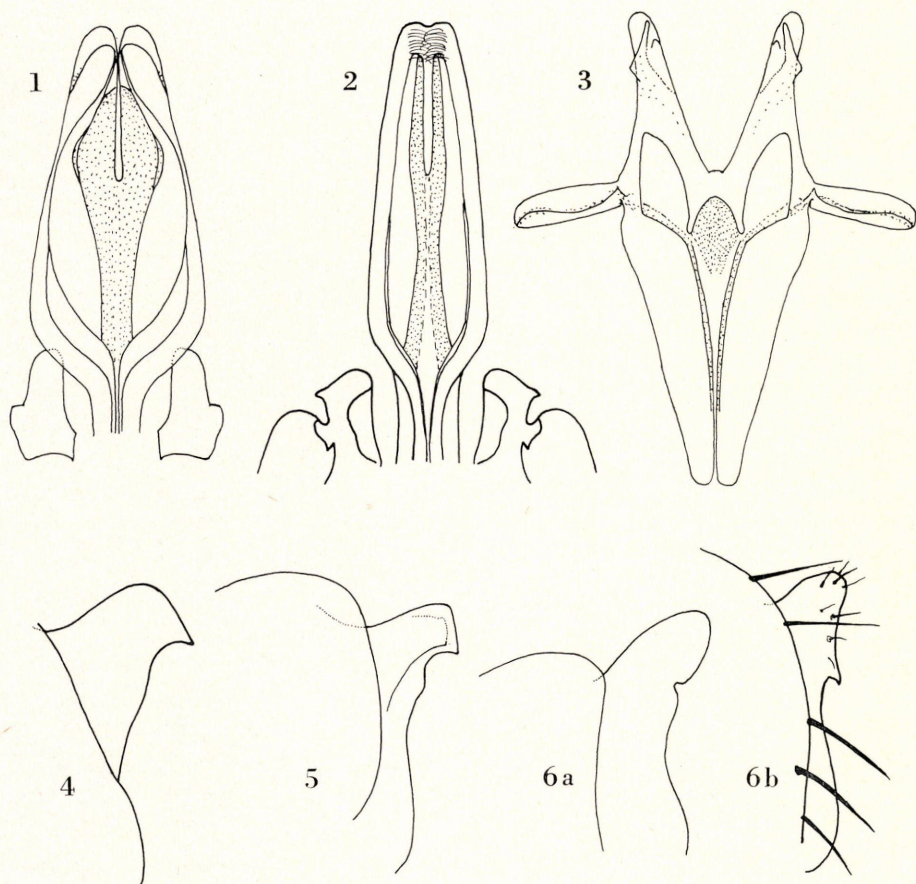
H. christophi (BECKER, 1895): 197, 182 (*Sapromyza*). — Lectotype ♂: "Sarepta 30274" (on light reddish label) "Typus" "*Sapromyza christophi* Type BECK. ♂" (BECKER's handwriting) (a well-preserved specimen, only anterior pair of *dc* bristles missing). — Paralectotypes: 1 ♂: "Sarepta 30274", "*christophi*". 1 ♀: Sarepta Christoph, 11574, Coll. H. LOEW, "*christophori* BECKER" (BECKER's handwriting). Types in the Zoologisches Museum, Berlin.

Longest hairs on arista only 0.06 mm long. Crossveins with brown surrounding area. *aemi* in 6 badly arranged rows on anterior part of mesonotum but 4 arranged rows between *dc* bristles. Median *ac* bristles longer than laterals. O+3 *dc*. Mid tibia with 2 strong ventroapical bristle. M_x of lectotype ♂: 1.86, wing length of lectotype ♂: 3.14 mm, width: 1.29 mm. The abdomen and genitalia of the lectotype ♂ are prepared on a slide. ♂ genitalia (Fig. 9), pregenital sternites (Fig. 14). — Body length of lectotype ♂: 3.27 mm.

H. dentiventris CZERNY, 1932: 10, 13. — Material studied: 1 ♂, 2 ♀ types in the collection of the Zoological Institute, Leningrad; 1 ♂ (with prepared genitalia): у Кондара, 1100 м, Варзоба, Тадж., Гуссаковский, 17. 9. 1938, "*Homoneura dentiventris* Cz." E. REMM, 1977.

A yellow species, only mesonotum and some parts of pleura covered with greyish to brownish pollen. Antennae vivid yellow, arista with short rays (longest one equals a half of width of 3rd antennal joint). Genae a little narrower than width of 3rd antennal joint and smallest genal width only 1/5 diameter of eyes. Eyes narrowed ventrally. First femur distally, anteroventrally with a row of small thornlets. 4 rows of *acmi*, inner two rows of enlarged bristles, presuturally some additional disarranged *acmi*. Wings clear but crossveins distinctly darker (dark brown) than other veins (ochraceous yellow) and crossveins have also a narrow area of a brownish hue. m_x of type ♂: 1.83. Finger-like process on the pregenital (6th) sternite of ♂ is thinner and longer than that of *christophi* BECK. ♂♂, the processes on the 5th sternite is somewhat longer, hind hypopygial process (surstylus) with more rounded apex than in *christophi*.

H. tesquae (BECKER, 1895): 205, 183 (*Sapromyza*). — Material studied: 1 ♂: "Ungarn 40868" (BECKER's handwriting). — "Paratypus" (red label) — "*Sapromyza tesquae* BECK. ♂" (BECKER's handwriting) — *H. tesquae* BECK. ♂, not type! det. L. PAPP. Several specimens in the



Figs. 1-6. ♂ genital parts of *Homoneura* species: 1 = *H. notata* FALL., phallus and surstyli in ventral view; 2 = *H. subnotata* sp. n., phallus and surstyli in ventral view; 3 = *H. remmi* sp. n., phallus in ventral view; 4 = *H. notata* FALL., surstylus in profile; 5 = *H. subnotata* sp. n., surstylus; 6/a = *H. maghrebi* sp. n., surstylus; 6/b = *H. tunisica* sp. n. surstylus

collection of the HNHM. A species very close to *H. christophi* BECK. (first I thought it synonymous with it) but its ♂ genitalia are different (Fig. 7 and 16, cf. Fig. 9. and 14). No other differences were found between the two species.

***Homoneura remmi* sp. n. (Figs. 3, 10, 13)**

A completely yellow species belong in the *minor* species-group. Frons dull yellow, ocellar triangle and orbitalia subshining. Longest hairs on arista 0.06 mm. Mesonotum anteriorly with 6 rows of badly arranged *acmi*, 4 well-arranged rows between *dc* bristles. 0+3 *dc* pairs. Median *acmi* much longer than lateral *acmi*, longest bristles about 0.28 mm. Mid tibia ventroapically with 1 shorter and 1 strong bristle. Crossveins in diffuse brown areas. m_x of holotype ♂: 2.22. Wing length: holotype ♂: 3.18 mm, paratypes: 2.94–3.50 mm, width: holotype ♂: 1.36 mm, paratypes: 1.09–1.40 mm. ♂ 5th sternite (Fig. 13) with some thick, blunt black thorns laterally, anterior part of 6th sternite with many long, comparatively thick bristles medially and several blunt black thorns laterally (these latter directed ventrally); posterior part of 6th sternite with a pair of small, bulb-like processes. Phallus (Fig. 3) very complex, surstylus (Fig. 10) with a long, ventrocaudally directed process (beset with small, thick, erect hairs). — Body length: holotype ♂: 3.00 mm, paratypes: 2.82–3.45 mm.

H o l o t y p e ♂: "Hungary, Csévharaszt, nyíres, 1968, VI. 6. leg. Soós Á." — **P a r a t y p e s**: 1 ♂: data same as for holotype; 1 ♂: "Oszlár, Holt Tisza, 8. 5. 1964., leg. Tóth S."; 1 ♂: "Vaskút, coll. THALHAMMER"; 1 ♂: "Velencei-tó, Velence, 30. 5. 1951.", leg. HALÁSZFY"; 2 ♂: "Ör Sz[ent]-Miklós, IV., VI., SAJÓ". — **E s t h o n i a**: 1 ♂: "Läti, Koiva j., org. Eësis, pajud, lepad, 3. 7. 1969., J. VILBASTE", "*Homoneura* ? *minor* BECK." E. REMM, 1970. 1 ♂: "Kihnu, Rootsikula, niiski puishiit, 11. 06. 1973, J. VILBASTE", "*Homoneura* ? *minor* BECK." E. REMM, 1973. — **R o m a n i a**: 1 ♂: "Temesvár, Hungaria, THALHAMMER"; 2 ♂: "Csorba, Hungaria, THALHAMMER"; — **J u g o s l a v i a**: 1 ♂: "Velebit, 5. 7."; 1 ♂: Vlašić, THALHAMMER".

H. remmi sp. n. is very near to *H. minor* (BECKER, 1895) and to other species of this species-group, nevertheless it differs from them by the characteristics of the ♂ pregenital sternites and of the ♂ genitalia (Fig. 10, 13, cf. Fig. 7, 9, 12, 14, 15, 16 and Fig. 13 of SHEWELL, 1971).

I dedicate the new species to Mrs. EVI REMM (Tartu), who has obtained remarkable results in the study of *Lauxaniidae* of the Baltic republics of the USSR.

***Homoneura shewelliana* sp. n. (Figs. 12, 15)**

(= *H. ? minor* [BECK.] of SHEWELL, 1971, designed with Fig. 12)

A yellow species with clear wings. Fronts mat yellow. Arista with short pubescence (longest hairlets 0.030–0.035 mm long), 0+3 *dc* pairs, anterior pair situated well beyond suture. Acrosticals in 4 rows, bristles in median rows longer (longest acrosticals on holotype 0.15 mm long). 1 *mp*, 2 *st*. Mid tibia with one strong and one smaller (slightly more than half as long) ventroapical bristles. Wings unspotted, veins yellow. c_x = 3.45, m_x of holotype: 1.89.

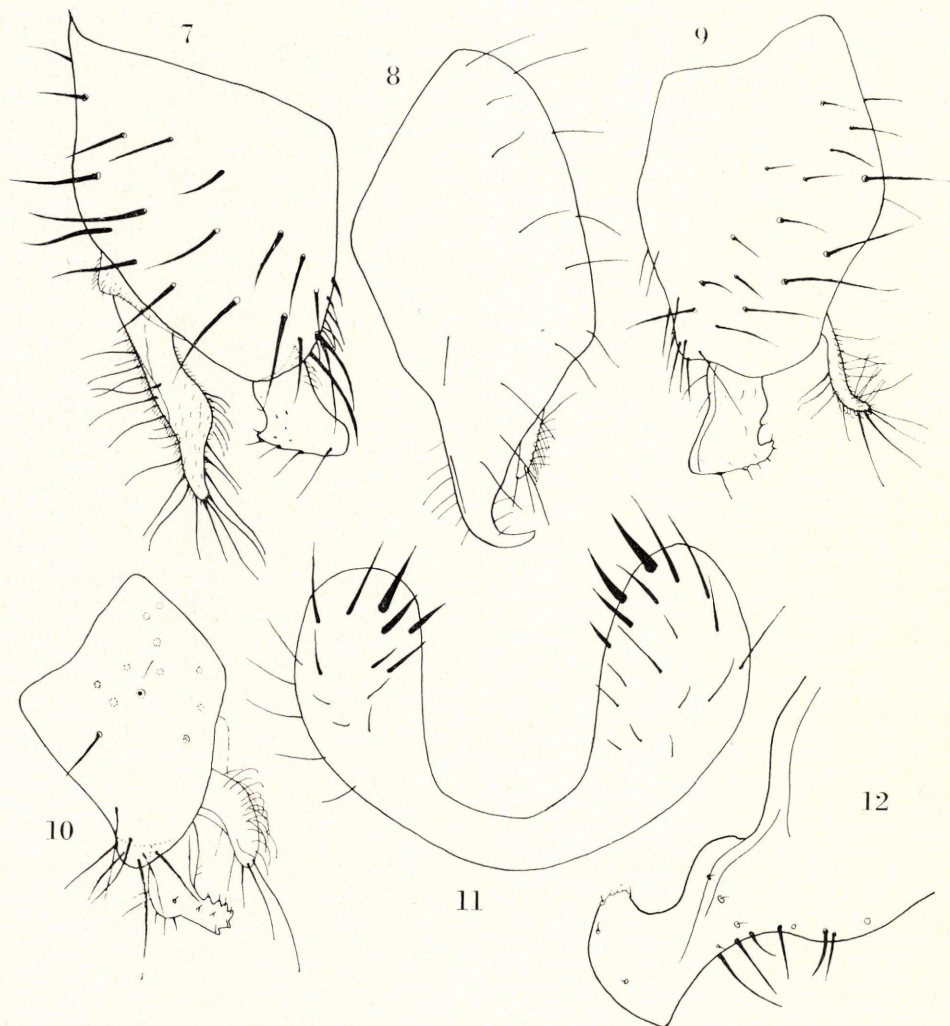
♂ 6th sternite (Fig. 15; Fig. 12 of SHEWELL, 1971) very complicated with a pair of long, wide, caudal processes; medially directed processes with many long bristles. Surstylus (Fig. 12) partly fused with hypopygium, with blunt end and with minute hairs and teeth. — ♀ 8th sternite short and simple, cerci short, with numerous thin, sinuate hairs. Wing length: holotype ♂: 2.76 mm, paratypes: 2.75–3.09 mm, width: holotype ♂: 1.06 mm, paratypes: 1.03–1.14 mm. — Body length: holotype ♂: 2.76 mm, paratypes: 2.59–3.09 mm.

H o l o t y p e ♂: "Mongolia, Central aimak, Kerulen, 45 km O v. Somon Bajandelger, 1400 m, Exp. DR. Z. KASZAB, 26. VII. 1965 (Nr. 304)", "*Homoneura* sp. ? *n. minor* (BECK.) Det. SHEWELL, 1966". — **P a r a t y p e s**: 4 ♀: data same as for holotype; 1 ♂, 5 ♀: "Bulgan aimak, cca 20 km W von Somon Bajannuur, 1100 m, 18. 6. 1966, DR. Z. KASZAB (Nr. 531)", 1 ♂: "Bulgan aimak, 4 km S von Somon Daschinčilen, 1200 m, 23. 7. 1966, DR. Z. KASZAB (Nr. 735)".

H. shewelliana sp. n. is near to *minor* (BECKER, 1895) but a little smaller. It distinctly differs from *minor* by the much longer processes of the 6th sternite of ♂, by the different shape and armature of the ♂ 6th sternite and of surstylus. The ♂ 5th sternite of the new species is almost without bristles, contrarily to *minor*, as males of *minor* have strong, short blunt black thorns on the margin of the 5th sternite. SHEWELL (1971) did not decide whether the

above form or a species he had from Berlin, is the true *minor* (BECKER, 1895). I am sure that the type-locality (Galicia) for *minor* gives enough basis for this decision: the European form is *minor* BECK., while the species from Mongolia is new.

The new species is dedicated to DR. GUY E. SHEWELL (Entomology Research Institute, Canada Dept. of Agriculture, Ottawa), an eminent expert in Diptera, including *Lauxaniidae*.



Figs. 7-12. ♂ genitalia of *Homoneura* species: 7 = *H. tesquae* BECK., outer genital parts in profile; 8 = *H. thalhammeri* sp. n., same; 9 = *H. christophi* BECK, same; 10 = *H. remmi* sp. n., same; 11 = *H. maghrebi* sp. n., pregenital sternite ventrally; 12 = *H. shewelliana* sp. n., surstylus

NOTATA species-group(*notata* FALL., *maghrebi* sp. n., *subnotata* sp. n. *tunica* sp. n.)***Homoneura maghrebi* sp. n. (Figs. 6, 11, 21)**

Body and legs yellow, wings spotted. Frons dull yellow, orbitalia and ocellar triangle subshining. Arista plumose, with long (about 0.06–0.07 mm) hairs. Thoracic chaetotaxy similar to that of *notata* FALL. Acrosticals in 4 rows. Very long bristles in median rows (but not longer than *prsc*). m_x of holotype ♂: 1.56, of a paratype: 1.54. Wing spots as in *notata* FALL. Mid tibia with two strong ventral apical bristles (shorter one about 0.15 mm). ♂ hind femur posteroventrally with (2/3–4/5) long but not too thick thornlike bristles (Fig. 21). Abdominal tergites with long marginal bristles. ♂ surstylus (Fig. 6) blunt, phallus comparatively thin, pregenital sternite (Fig. 11) with some short but thick bristles. ♀ 8th sternite simple. Wing length of holotype ♂: 3.45 mm, paratypes: 3.09–3.41 mm, width: holotype ♂: 1.38 mm, paratypes: 1.30–1.31 mm. — Body length: holotype ♂: 3.24 mm, paratypes: 3.2–3.3 mm.

Holotype ♂: "Algeria, La Croix, 1913. IX. 1." — **Paratypes**: 3 ♂: data same as for holotype; Tunisia: 1 ♂: "Babouch, 4. 8. 1913". One female specimen in our collection (data same as for holotype) may also belong here.

***Homoneura subnotata* sp. n. (Fig. 2, 5, 18, 20)**

A yellow species with spotted wings. Arista plumosa with 0.10 mm long hairs. 0+3 *dc* pairs (anterior pair just behind the suture). Acrosticals in 4 rows between *dc* bristles, median rows of long bristles (5–6 pairs), longest pair longer than *prsc* bristles. Wings spotted as in *notata* FALL. (end of r_{2+3} and of r_{4+5} , and crossveins with dark brown spots, another 2 spots on r_{4+5}), veins ochreous yellow but dark brown in the spots. m_x of holotype only 1.25. Mid tibia with 1 very strong and 1 shorter ventral apical bristle. ♂ hind femur (Fig. 20) posteroventrally with a row of long, thick black thorns between middle and distal fourth of femur (5–6:7) thorns, hind trochanter with thin bristles only. ♂ pregenital sternite asymmetrical (Fig. 18) without thick bristles. Surstylus (Fig. 2, 5) short, with a caudal and a lateral tip, phallus (Fig. 2) not wide. ♀ 8th sternite deeply bilobate, deeply cleft beneath, lateral lobes narrowly blunt. Wing-length of holotype ♂: 3.41 mm, of paratypes: 3.53–3.64 mm width: holotype ♂: 1.36 mm, paratypes: 1.36–1.56 mm. — Body length: holotype ♂: 3.56 mm, paratypes: 3.24–3.64 mm.

Holotype ♂: "Hungary, Szatmár-Ökörítő, SZILÁDI, 1939. VIII. 2." "*H. notate*" Det. SZILÁDY [1] 939. — **Paratypes**: 1 ♂, 1 ♀: data same as for holotype; 1 ♂: "Kaloča, KERTÉSZ, 2. 9. 1907."; 1 ♂: "Kaloča, THALHAMMER"; 1 ♂: "Szeghalom, KERTÉSZ, 26. 6. 1901." — Romania: 1 ♂: "R.-Vadului, Transsylvan., THALHAMMER"; Czechoslovakia: 2 ♂: "Bohemia centr. Týnec n. Labem, env. Kolin, lgt. V." Martinek, 18. 7. 72."; 1 ♂: "Rózsahegy (= Ružomberok), Hungaria, THALHAMMER". — Bulgaria: 1 ♂: "Varsec, 1.–10. 8. 919., SZILÁDY". — Germany: 1 ♂: "Berlin, Pichelsberg, 10. 9. [18]95." "Don. Dtsch. Ent. Inst.". — Italy: 1 ♂: "Bozen [= Bolzano], 26. 7. [19]11."

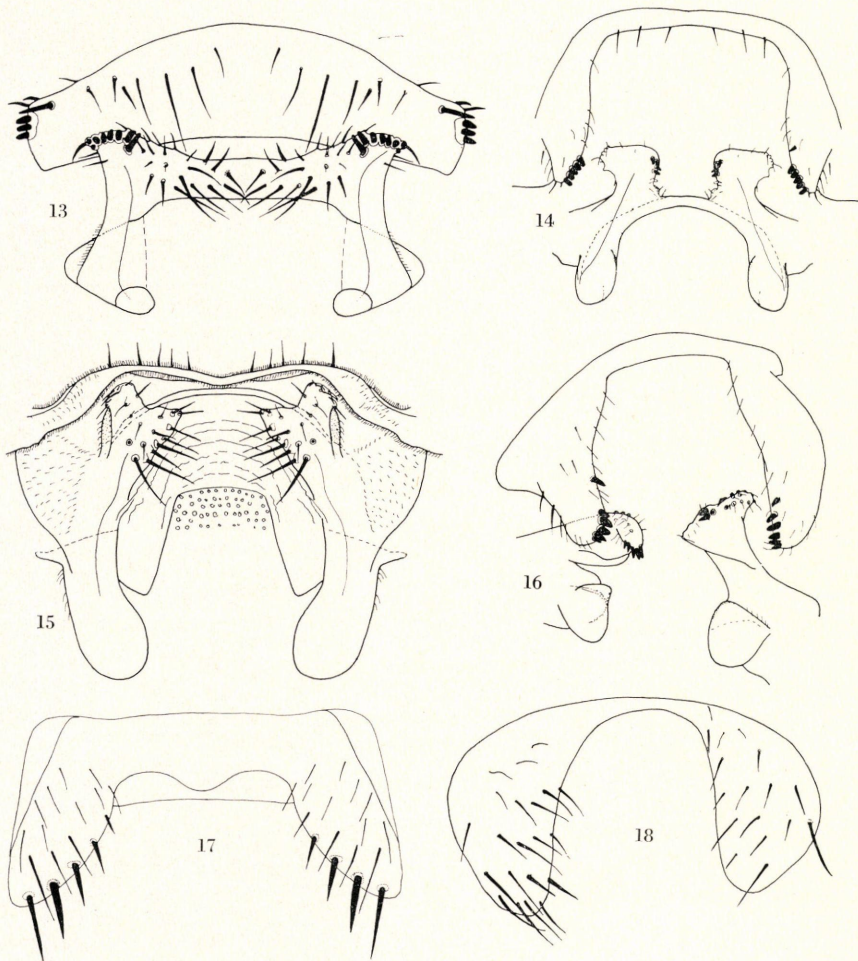
***Homoneura tunica* sp. n. (Figs. 6b, 22)**

A yellow species with spotted wings. Arista plumose with 0.06–0.07 mm long hairs. Acrosticals in 4 rows, bristles in median rows much longer than those in lateral rows but longest acrosticals at most 3/4 of *prsc* bristles in length. Wing spots similar to those of *notata* FALL., e.g. spots on ends of veins r_{2+3} and r_{4+5} on crossveins and other 2 spots on r_{4+5} . m_x of holotype: 1.46, of a paratype: 1.48. Mid tibia with two strong ventral apicals (shorter 0.14 mm). ♂ hind femur posteroventrally with a row of long and thick thorns (Fig. 22), some of them extremely long, on proximal 3/4–7/8 of femur. ♂ hind trochanter with (4)5 thick, slightly curved thornlike bristles. ♂ pregenital sternite with short and thin bristles only. Phallus extremely long reaching hind coxae, with a sharp ventromedial ridge. Surstylus (Fig. 6b) with a blunt end but with an anteriorly placed sharp process. — Body length: holotype ♂: 3.1 mm, paratypes: 3.1–3.2 mm.

Holotype ♂: "Tunisia, Bel Mehtia, 1913. VIII. 30." "*Homoneura notata* FALL." Det. SZILÁDY, 1938. — **Paratypes**: 1 ♂: "Tunisia, Les Chênes, 12. 8. 1913"; 3 ♂: "Algeria, La Croix, 1. 9. 1913."

KEY FOR THE PALAEARCTIC SPECIES OF THE *H. NOTATA*-GROUP

- 1 (2) ♂ hind femur posteroventrally with evenly distributed, comparatively short (shorter than diameter of tibia), black thornlike bristles (Fig. 19). ♂ pregenital sternite (Fig. 17) wide, with very thick bristles. Phallus wide, surstylus simple (Fig. 1, 4). ♂ hind trochanter with thin bristles only
- notata** (FALLÉN, 1820)
- 2 (1) ♂ hind femur posteroventrally with much longer bristles (at least some of them longer than diameter of tibia (Figs. 20-22). ♂ pregenital sternites without thick bristles or with less numerous thick bristles (Fig. 18, 11). Surstyli of other form (Figs. 5, 6a, 6b).



Figs. 13-18. *Homoneura* species, pregenital sternites: 13 = *H. remmi* sp. n., 5th and 6th sternites; 14 = *H. christophi* BECK., 5th and 6th sternites; 15 = *H. shewelliana* sp. n. 5th and 6th sternites; 16 = *H. tesquae* BECK., 5th and 6th sternites; 17 = *H. notata* FALL., 6th sternite; 18 = *H. subnotata* sp. n., 6th sternite

- 3 (4) ♂ hind femur with a row of thorns on proximal 3/4 to 7/8 of femur, some of them extremely thick and long (Fig. 22). ♂ hind trochanter with thick bristles. Phallus very long (reaching the base of abdomen) with very sharp ventromedial ridge. Pregenital sternite without any thick bristles. Surstylus as in Fig. 6/b. Bristles in median acrostical rows at most 3/4 as long as *prsc* bristles. (Tunisia, Algeria)
tunisica sp. n.
- 4 (3) ♂ hind femur with at most 7 long, thornlike bristles at about middle (Figs. 20, 21). Only thin bristles on ♂ hind trochanter. Phallus somewhat shorter. Surstylus (Figs. 5, 6) of other form. At least one pair or more bristles in median acrostical rows as long as or longer than *prsc* bristles.
- 5 (6) ♂ surstylus with two tips (Fig. 5). Pregenital sternite (Fig. 18) without thick bristles. Thornlike bristles on ♂ hind femur (Fig. 20) longer, thicker and more numerous than in following species. ♀ 8th sternite bilobed posteriorly. (Central Europe)
subnotata sp. n.
- 6 (5) ♂ surstylus blunt (Fig. 6). Pregenital sternite (Fig. 11) with some short but thick bristles. Thornlike bristles on ♂ hind femur (Fig. 21) shorter, thinner, and less in number than in *subnotata* sp. n. ♀ 8th sternite simple. (Algeria, Tunisia)
maghrebi sp. n.

H. tenera (LOEW, 1846): 366 (*Sapromyza*). — **H o l o t y p e** ♀. A completely yellow species. Arista with very short hairs. 0+3 *dc* pairs. Acrosticals in 4, ± well-ordered rows, no enlarged *acmi*. Longest acrostical as long as *dc* microchaetae. 1 *h*, 2 *np*, 1 *prsut*, 1 *sa*, 2 *pa*, 1 *propl*, 1 *mp*, 2 *st* pairs of bristles. Legs without any modifications. Wing length of holotype ♀: 3.78 mm, crossveins, end of r_{2+3} and of r_{4+5} and *m* with dark brown spots, similar dark spot on about middle of r_{4+5} (the spots look like a band each along veins as the holotype is a somewhat immature specimen). Female cerci brown with many wavy curved hairs. — Body length of holotype ♀: 2.68 mm.

H o l o t y p e: ♀: Cassei, Hoffm. — 11591 — Coll. H. LOEW — Typus — "*Sapromyza tenera* m." (LOEW's handwriting).

The above short description was given since BECKER and CZERNY placed it wrongly in their keys.

Homoneura thalhammeri sp. n. (Figs. 8, 32)

A yellow species with unspotted wings. Frons dull yellow, ocellar triangle and orbitalia subshining. Third antennal joint 1.5 times longer than its width. Arista pubescent, with hairlets of equal length (shorter than 0.03 mm). Genae only a little wider than diameter of third antennal joint. Thoracic chaetotaxy: 1 *h*, 2 *np*, 1 *prsut*, 0+3 *dc* (anterior pair just behind suture), 2 *sa*, 1 *pa*, 1 *prsc*, 1 *mp*, 2 *st* pairs of bristles. 1 weak *propl*. Arcosticals in 6 rows presuturally, in 4 rows before prescutellars. No enlarged *acmi*, bristles in median rows hardly longer than those in lateral rows. Legs yellow, all tibiae with dorsal preapical bristles. A very strong ventral apical on mid tibia. Wings comparatively narrow, pale brownish grey, veins ochreous yellow. Costa with strong fringe of small black bristles to conjointment with vein r_{4+5} , c_x of holotype: 3.31, m_x = 2.0. Wings without any dark spots or diffuse dark coloration. Wing length: holotype ♂: 3.24 mm, paratypes: 3.00–3.44 mm, width: holotype ♂: 1.17 mm, paratypes: 1.09–1.33 mm. ♂ genitalia very characteristic. 6th (pregenital) sternite (Fig. 32) quadrangular, thinly chitinized, anteriorly with a pair of bulb-like protuberance. Surstyli coalescent with hypopygium (Fig. 8). Hypopygium very long dorsally, cerci rather small. No conspicuous gonites. — Body length: 2.94 mm, paratypes: 2.68–3.37 mm.

H o l o t y p e ♂: Czechoslovakia: "Rózsáhegy, Hungaria, THALHAMMER", "*Sapromyza consobrina* ZTT." "coll. THALHAMMER". — **P a r a t y p e s**: 1 ♂: data same as for holotype; 1 ♀: "S. A. Ujhely, Hungaria, THALHAMMER"; 1 ♂: "Sz. Fehérvár, Hungaria, THALHAMMER", "*Sapromyza consobrina* ZTT." coll. THALHAM. 1 ♂: "Örsz. Miklós, SAJÓ, VII.", "*patelliformis*" det. SZILÁDY, 1940. — Romania: 2 ♂: "Csorba, Hungaria, THALHAMMER", "*Sapromyza consobrina* ZTT." coll. THALHAMMER (specimens in rather poor condition).

H. thalhammeri sp. n. is an easily recognizable species, with its six acrostical rows of equal length, also the shape of ♂ surstyli is very characteristic. In CZERNY's (1932) key it runs to couplet 7 (*Sapromyza filia* BECK., but it is a *Minettia* species, see below). The shape

of the male surstyli of the new species is somewhat similar to that of *H. spinidorsum* SHEWELL, 1971, but its pregenital sternite is completely different (*spinidorsum* has no processes on it), and it has only 4 rows of long *acmi* (contrarily to the six rows in the new species).

I dedicate this new species to JÁNOS THALHAMMER, the collector of the type-series, who was the first expert in dipterology in Hungary.

Revised list of the Palaearctic species of

Homoneura v. D. WULP, 1891

- | | |
|---|--|
| <i>albomarginata</i> CZERNY, 1932* | <i>pictipennis</i> CZERNY, 1932* |
| <i>biumbrata</i> (LOEW, 1847) | <i>rectangulata</i> CZERNY, 1932 |
| (syn.: <i>kowarzi</i> CZERNY, 1932, see REMM, 1978) | <i>remmi</i> sp. n. |
| <i>chinensis</i> MALLOCH, 1923 | <i>septentrionalis</i> (LOEW, 1847) |
| (Szechuan, not Palearctic?) | (syn.: <i>mellina</i> CZERNY, 1932, see SHEWELL, 1971) |
| <i>christophi</i> (BECKER, 1895)* | <i>shewelliana</i> sp. n. |
| <i>consobrina</i> (ZETTERSTEDT, 1847) | <i>spinidorsum</i> SHEWELL, 1971* |
| <i>dentiventris</i> CZERNY, 1932* | <i>stackelbergi</i> CZERNY, 1932* |
| <i>euaresta</i> (COQUILLET, 1898) | <i>subnotata</i> sp. n. |
| <i>extera</i> CZERNY, 1932* | <i>tenera</i> (LOEW, 1846)* |
| <i>filiola</i> CZERNY, 1932* | <i>tesquae</i> (BECKER, 1895) |
| <i>grahami</i> MALLOCH, 1929 | <i>thalhammeri</i> sp. n. |
| (Szechuan, not Palearctic?) | <i>transversa</i> (WIEDEMANN, 1830) |
| <i>interstincta</i> (FALLÉN, 1820) | <i>tunisica</i> sp. n. |
| <i>japonica</i> CZERNY, 1932* | Still doubtful species: |
| <i>kaszabi</i> SHEWELL, 1971* | <i>bergenstammi</i> CZERNY, 1932 |
| <i>lamellata</i> (BECKER, 1895)* | (types were not found in the collection of the |
| <i>lasdini</i> CZERNY, 1932* | Naturhistorisches Museum, Vienna) |
| <i>limnea</i> (BECKER, 1895)* | <i>dilecta</i> (RONDANI, 1868) |
| <i>maghrebi</i> sp. n. | (genus doubtful) |
| <i>mayrhoferi</i> CZERNY, 1932 | <i>octostriata</i> CZERNY, 1932 |
| <i>minor</i> (BECKER, 1895)* | (described on the basis of a single female, not |
| <i>modesta</i> (LOEW, 1857) | seen, genus doubtful) |
| <i>notata</i> (FALLÉN, 1820) | <i>vicina</i> (MEIJERE, 1907) |
| <i>patella</i> SHEWELL, 1971* | (not seen, genus doubtful) |
| <i>patelliformis</i> (BECKER, 1895) | |

Minettia ROBINEAU-DESVOIDY, 1830

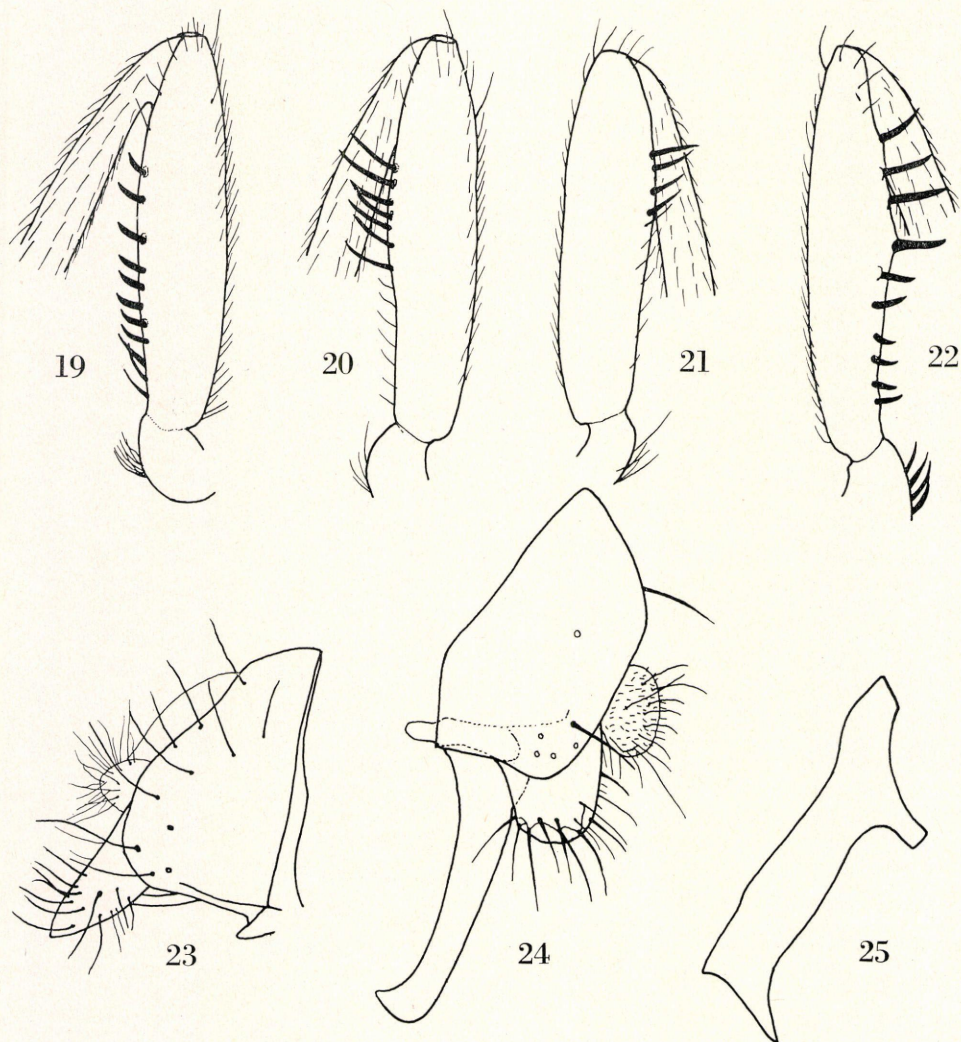
M. biseriata (LOEW, 1847): 29 (*Sapromyza*) — **Holotype** ♀: Coll. H. LOEW, Type (red label), "*Sapromyza biseriata* m." (LOEW's handwriting). The holotype is in a quite good state of preservation. Its head is glued back, it is not in the right position: mouth opening directed forward now. The fore right leg is missing. The most important features of this species can be summarized as follows: Body length: 4.5 mm. Yellow species, mesonotum, some parts of pleura, disc of scutellum and legs covered with \pm thick grey pollen. Palpi clear yellow, antennae yellow with some light reddish hue. Arista elonately plumose. 0 + 3 *dc* pairs, 2 *ia*, 6 rows of acrosticals between *dc* rows. Mesopleuron setose with 1 very long bristle; 2 *st*. Mid tibia with only 1 dorsal preapical and 1 ventral apical bristle. Third abdominal segment not shortened, nearly as long as 4th segment. Third tergite bears three pairs of short and thin bristles medially and about 8 pairs of very long and thick bristles (longest is 0.66 mm, thus, a little longer than 4th tergite). Fourth tergite with only 1 pair of short bristles medially and with 6 or 7 very long, thick bristles on both side (longest 0.56 mm, thus much longer than 5th tergite). Fifth tergite with only 6 pairs of short and rather thin bristles (longest is 0.23 mm long). Sixth to ninth segments retracted, cerci rather small, with short fine sinuate hairs. Wings without dark coloration around crossveins.

M. quadrisetosa (BECKER, 1907): *Sapromyza plumicornis* var. *quadrisetosa* BECKER, 1907: 383. — I studied two syntype ♂♂ from BECKER's collection ("Algier, 52247, IV. "*plumicornis* FALL. var. *quadrisetosa*" det. BECKER). It has 1 + 3 *dc* pairs and antennae have shorter branches than those of

* Type-specimen(s) seen.

plumicornis FALL. t_a-t_p section is shorter, $m_x = 1.68$. I agree with CZERNY, concerning the status of the species.

M. longiseta (LOEW, 1847): 26 (*Sapromyza*), **M. tetrachaeta** (LOEW, 1873): 50 (*Sapromyza*) — The two species represent a natural group, as females have a modified, strongly shortened third abdominal segment and only few but very long and thick black bristles on third abdominal segment. The two species differ in characteristics as follows:



Figs. 19—25. 19 = *Homoneura notata* FALL., ♂ hind femur, posterior view. — Figs. 20—22. ♂ hind femur: 20 = *H. subnotata* sp. n., 21 = *H. maghrebi* sp. n., 22 = *H. tunisica* sp. n. — Fig. 23. *Lyciella subfasciata* ZETT., ♂ genitalia in profile. — Figs. 24—25. *L. mihalyii* sp. n.: 24 = ♂ genitalia in profile with left gonite, 25 = right gonite

longiseta ♀

1. mesonotum dark grey
2. cerci not shortened, with shorter, sinuate hairs
3. abdomen lemon-yellow
4. palpi black
5. antennae with brown hue at least on apical 2/3 of 3rd joint

tetrachaeta ♀

1. mesonotum reddish yellow covered with thick grey pollen
2. cerci very short, with longer sinuate hairs
3. abdomen ochreous yellow
4. palpi yellow
5. antennae completely yellow

Material studied:

3 ♀: Tunis: "Bel Mechti, Ain Draham, Les Sources, 5. 8., 24. 6., 29. 6. 1913."

1 ♀: "Kasan, 21. 6. 71., 11606, Coll. H. LOEW" "*Sapromyza tetrachaeta*"; 1 ♂, 2 ♀: "Csákvár, Haraszt-h. 25. 9. 1964, leg. ZSIRKÓ"; 1 ♀: „Mát-ra, Pisztrángos-tó, 23. 6. 1964, leg. Soós".

Revised list of the Palaearctic species of

Minettia ROB.-DESV., 1830

Subgenus *Frendelia* COLLIN, 1948:

longipennis (FABRICIUS, 1794)

Subgenus *Minettia* ROB.-DESV., 1830:

andalusiaca (STROBL, 1899)

austriaca HENNIG, 1951

biseriata (LOEW, 1847)** **

flavipalpis (LOEW, 1847)**

plumichaeta (RONDANI, 1868)**

dedecor (LOEW, 1873)*

dissimilis COLLIN, 1966

fasciata (FALLÉN, 1826)

(syn.: *subvittata* (LOEW, 1847))

filia (BECKER, 1895) **comb. n.**

(holotype ♀ was studied)

flaviventris (COSTA, 1843)

helva CZERNY, 1932*

helvola (BECKER, 1895)*

inusta (MEIGEN, 1826)

loewi (SCHINER, 1864)

longiseta (LOEW, 1847)

lupulina (FABRICIUS, 1787)

muricata (BECKER, 1895)

nigriventris (CZERNY, 1932)*

plumicornis (FALLÉN, 1820)

quadrisetosa (BECKER, 1895)*

rivosa (MEIGEN, 1826)

(see COLLIN 1948)

styriaca (Strobl, 1892)

tetrachaeta (LOEW, 1873)

tinctiventris (RONDANI, 1868)

tubifer (MEIGEN, 1826)

(syn.: *trispina* [RONDANI, 1868])

Doubtful species:

bicolor (MACQUART, 1835)

desmometopa (DE MEJERE, 1907)

(? syn. of *tubifer* MEIG.)

pallida (MEIGEN, 1830)

uncinata (DE MEJERE, 1907)

(? syn. of *fasciata* FALL.)

HENNIG (1951) described a species, *Minettia codinai*, which has features similar partly to species of *Minettia* and partly to species of *Peplomyza*. HENNIG probably was not aware of the description of the genus *Peplominettia* SZILÁDY, 1943; his species belongs to the latter genus: *Peplominettia codinai* (HENNIG, 1951), **comb. n.**

Lyciella mihalyii sp. n. (Figs. 24, 25, 41)

A species very similar to *L. subfasciata* (ZETTERSTEDT, 1838) i.e.: body yellow, wings clear, unspotted, apical half of third antennal joint and apical part of palpi black, only 2 rows of long and comparatively thick acrosticals; m_x of wing about 1.45, fore femur anteroventrally without a row of tiny spines. It differs from *subfasciata* by the characteristics of the ♂ genitalia.

♂ pregenital sternite (Fig. 41) less emarginated posteriorly than that of *subfasciata* ZETT. (Fig. 31), with shorter bristles. Surstylus (Fig. 24) blunt and much shorter than that of *subfasciata* (Fig. 23). Two asymmetrical gonites: left gonite (Fig. 24) simple with proclinate tip, right gonite (Fig. 25) with two tips, posteriorly directed tip longer. Phallus long. Wing length: holotype ♂: 4.64 mm, paratypes: 3.95–4.77 mm, width: holotype ♂: 1.76 mm, paratypes: 1.51–1.80 mm. — Body length: holotype ♂: 3.63 mm, paratypes: 3.1–3.91 mm.

* Type-specimen(s) seen.

** These three names may refer to the same species.

Holotype ♂: "Bártfa (= Bardejov, Slovakia), Csergő h., 1969, VII. 5. leg. MIHÁLYI". — **Paratypes**: 3 ♂: data same as for holotype; Czechoslovakia: 1 ♂: "Magura, PÁVEL", "*illota* Lw." det. KERTÉSZ; 1 ♂: "Alacsony Tatra, Mala Vapenica, 21. 7. 1964., HORVATOVICH". — Hungary: 1 ♂: "Bükk-hg., Bálvány, 1. 7. 1966., leg. RESKOVITS"; 1 ♂: "Hosszúbérc, Bükk fennsík, 9. 6. 1954., leg. MIHÁLYI"; 1 ♂: "Bükk-hg., Jávorkút, 20. 8. 1963., leg. HORVATOVICH"; 1 ♂: "Mátra-szentlászló, rét, 8. 9. 1965, leg. Soós Á."; 1 ♂: "Mátra-hegys., Pisztrángos tó, 20–27. 6. 1955., MIHÁLYI & KAKASSNÉ"; 2 ♂: "Mátra hg., Kékes, 23. 7. 1969., leg. MIHÁLYI". — Romania: 1 ♂: "Békási-szoros, SZIL.[ády], 22. 8. 1931.", "*Lycia illota*" det. SZILÁDY, 1937; 1 ♂: "Temesvár, Hungaria, THALHAMMER", "*subfasciata* ZETT." coll. THALHAM.; 1 ♂: "Retyezát, SZILÁDY, 18. 8. 1898., 1000 m"; "*subfasciata* ZETT." det. KERTÉSZ, det. SZILÁDY, 1938; USSR: 1 ♂: "Tiszabogdány, 13. 8. 1939, DUDICH", "*subfasciata*" det. SZILÁDY, 1940.

Lyciella mihalyii sp. n. is very similar to *L. subfasciata* (ZETT.) and it differs from it by the ♂ genitalia: surstylus short and blunt (contrarily to long, acute surstylus of *subfasciata* (Fig. 24, cf. 23), it has a pair of asymmetrical gonites, there are no distinct conspicuous gonites on *subfasciata*. Phallus much longer than in *subfasciata*. COLLIN (1948) named a form of *subfasciata* as var. *obtusa* var. n., which has blunt surstylus but since he wrote: "no rods alongside the conical aedeagus", it seems questionable that COLLIN's specimens are identical with *mihalyii* sp. n. (let alone the deficiencies of COLLIN's work: the description is only of a few words, and no type was designated).

Lyciella conjugata (BECKER, 1895): 225, 189 (*Sapromyza*). — **Material studied**: 1 ♀ syntype: "Vaganski Vrh., 2. VIII.", "*Sapromyza conjugata* BECK." det. BECKER, 46171. — The type specimen agrees completely with the Hungarian and other Central European specimens.

Lyciella deludens (CZERNY, 1932): 40, 42 (*Lycia*). — **Holotype** ♀: "Карташевка, Петроград 5. VIII. 1926, Штабельберг," "*Lycia deludens* CZERNY" det. CZERNY (in the collection of the Zoological Institute, Academy of Sciences, Leningrad).

The genitalia of the holotype is seen also from the outside without any preparation and on the basis of its study it was found that it is conspecific with *L. decipiens* (LOEW, 1847), thus *Lyciella deludens* (CZERNY, 1932) **syn. n.** is synonymous with *L. decipiens* Lw.

The only differentiating character, which CZERNY gave to separate it from *decipiens*, was the specimen has black bands on the mesonotum. Studying the specimen, it was found that there are no such bands but after the killing of the specimen it darkened in some areas owing to the decomposition of organic matter in the mesonotum. CZERNY described the specimen as a ♀ with a question mark; as a matter of fact, the structure of the postabdomen is clearly seen, which proved beyond question that it is conspecific with *decipiens* Lw.

Lyciella nitidifrons (BECKER, 1895): 189 (in key), 227 (there as *nitifrons* n. sp. ♂) (*Sapromyza*). — BECKER described the holotype to be a male but in fact it is a female. Furthermore, it is beyond question that it is a female specimen of *Lyciella decipiens* (LOEW, 1847). The postabdomen of this species is so characteristic that it is quite unmistakable. As a distinguishing feature, BECKER said that its frons was shining contrarily to *decipiens* but only some shining mucous material, which soiled the antennae and frons of the specimen during its capture or pinning, made the frons shining. The other separating character given by BECKER (i.e. that the arista of *nitidifrons* is more elongately plumose than that of *decipiens*) is simply not true.

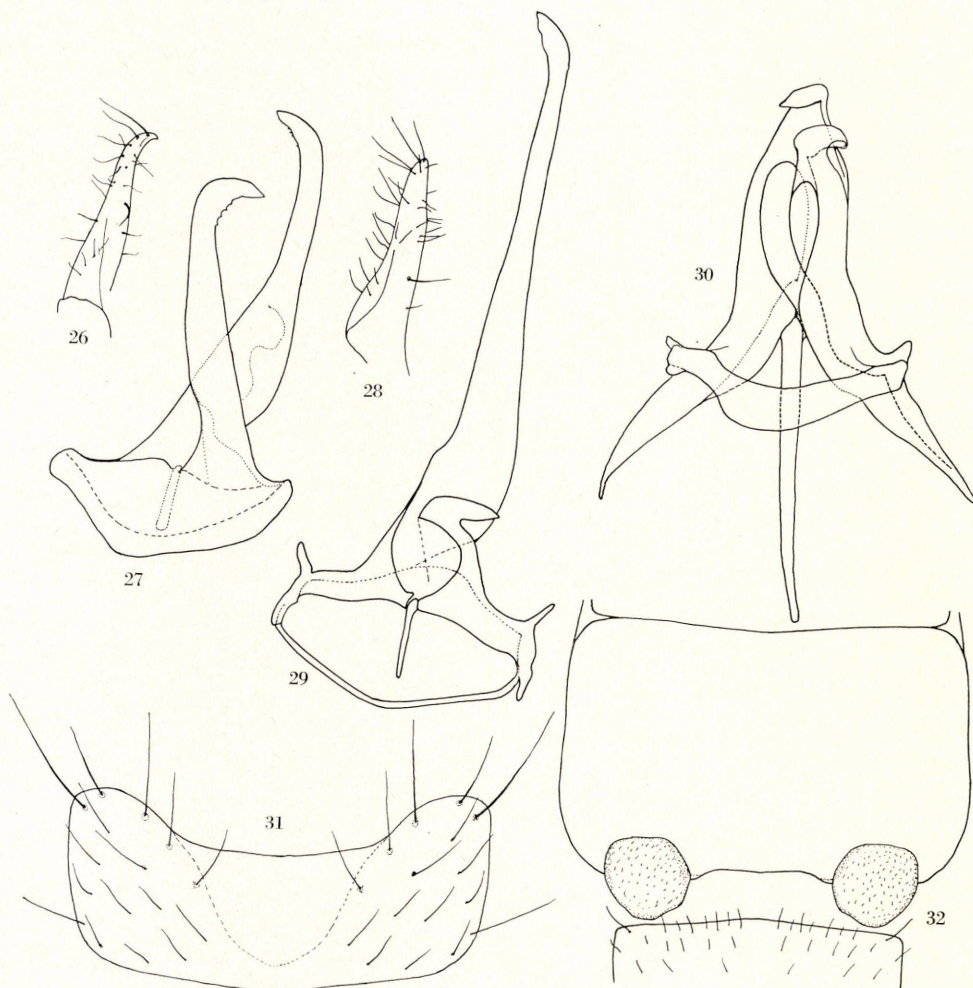
Material studied: holotype ♀ (Reichenhall, coll. H. LOEW). *Sapromyza nitidifrons* BECKER, 1895 is a new synonym of *Lyciella decipiens* (LOEW, 1847).

***Lyciella stylata* sp. n. (Figs. 26, 28, 29)**

A species very near to *pallidiventris* (FALLÉN, 1820), i.e. arista with short pubescence, thorax dull grey, four acrostical rows, no anteroventral row of tiny spines on distal part of fore femur, third antennal joint brown, wing veins light brown, abdomen yellowish with brown marginal bands on tergites.

It differs from *pallidiventris* FALL. by the ♂ genitalia. Surstylus (Fig. 28) less curved at tip than that of *pallidiventris* (Fig. 26), left gonite very long, right gonite short and much curved (Fig. 29), those of *pallidiventris* (Fig. 27) nearly equal in length, left one much shorter than that of *stylata* sp. n. Wing length of holotype ♂: 5.0 mm, width: 2.00 mm, paratypes: 4.8–5.4 mm, and 1.80–2.10, respectively. — Body length: holotype ♂: 4.55 mm, paratypes: 3.7–4.6 mm.

Holotype ♂: "Hungary, Börzsöny hg., Magyarkút, erdő, 1973. IX. 16., leg. PAPP L." (HNHM). — **Paratypes** (in the collection of the HNHM): 1 ♂: "Mátraháza, 22. 7. 1865., fénycsapda"; 1 ♂: "Bükk hg., 17. 9. 1957., Tardi-patak völgye, leg. TÓTH S."; 2 ♂: "Makkoshotyka, Zempléni hg., 5. 6. 1967.", "1. 8. 1965.", "fénycsapda"; 1 ♂: "Dobogókő, szálerdő, 5. 7. 1957., leg. MIHÁLYI"; 1 ♂: "Sopron, Fáber-rét, 21. 9. 1967, leg. MÓCZÁR L."; 5 ♂: "Pécs, THALHAMMER, 17. 7., 4. 7."; 1 ♂: "Zengő, THALHAMMER". — Czechoslovakia: 1 ♂: "Bártfa, Csergő h., 5. 7. 1969., leg. MIHÁLYI". — Romania: 1 ♂: "Szászka, Kristen, 30. 5. 1903." — Yugoslavia: 2 ♂: "Plitvica, KERTÉSZ, 11. 6. 1912."; 1 ♂: "THALHAM." — Austria: 1 ♂: "*Sapromyza pallidiventris*, Theresianum, Coll. POK.[orny]", "*pallidiventris* FALL." det. KERTÉSZ; 1 ♂: "Austria inf., Mödling", "*pallidiventris* FALL." det. KERTÉSZ. — Paratypes (in the collection of the Eesti NSV Tead. Akad. Zool. ja Bot. Instituut): Latvia: 1 ♂: "Lake Vilages, 20. 8. 1967, J. VILBASTE"; 1 ♂: "Edole, leg. E. REMM, 14. 6. 68."; Estonia: 1 ♂: "Sangaste, leg. E. REMM, 14. 07. 59."; 1 ♂: "Ib. Saarimaa, Kingissepa, light-trap, leg. E. REMM, 6. 08. 67."



Figs. 26–27. *Lyciella pallidiventris* FALL.: 26 = surstylus and 27 = ♂ gonites in ventral view. — Figs. 28–29. *L. stylata* sp. n.: 28 = surstylus, 29 = gonites in ventral view. — Fig. 30. *L. subpallidiventris* sp. n.: gonites. — Fig. 31. *Lyciella subfasciata* ZETT.: ♂ pregenital sternite. — Fig. 32. *Homoneura thalhammeri* sp. n.: ♂ pregenital sternite

Lyciella subpallidiventris sp. n. (Fig. 30)

Very similar to *pallidiventris* (LOEW, 1847) (see above); it differs by the male genitalia only; thorax mainly dull grey, abdomen yellow with dark brown hind marginal bands on tergites; third antennal joint yellowish brown to brown. 1 + 3 *dc* pairs, acrosticals in 4 rows, first femur distally, anteroventrally without a row of small spines; palpi light brown, 1 *propl*, 1 *mp*, 2 *st*. $m_x = 1.97$. ♂ surstylus very similar to that of *pallidiventris* but gonites shorter and much thicker and tips more curved, apodema much longer than in *pallidiventris* (Fig. 30, cf. Fig. 27). Wing length: holotype ♂: 5.36 mm, paratypes: 4.82–5.45 mm, width: holotype ♂: 2.06 mm, paratypes: 1.82–2.12 mm Body length: holotype ♂: 3.73 mm, paratypes: 3.65–4.55 mm.

Holotype ♂: "Hungary, Makkoshotyka, Zempléni hg., 1965. VIII. 1. fénycsapda" (HNHM). — Paratypes (HNHM): 3 ♂: "Pécs, THALHAMMER, 17. 7."; 1 ♂: "Szalkaszentmárton, 15. 8. 1952., leg. MIHÁLYI"; 1 ♂: "Bugaci nagyerdő, 21.25. 6. 1950., leg. MÓCZÁR". — Germany: 1 ♂: "Berlin, Oldenberg, Pich., 28. 8." "*Sapromyza pallidiventris* FLL." Coll. THALHAMMER.

Sapromyza FALLÉN, 1820*Schumannimyia* subg. n. (Figs. 34, 38)

Body olive-green to black, legs black, only fore part of frons, antennae, knees and tarsi can be lighter. Frons \pm concave in its anterior third (Fig. 34) in the type-species, frons meeting face in right angle or an angle smaller than 90°. Face flat, somewhat concave, genae wider than diameter of third antennal joint. Arista bare or with very short pubescence. Thoracic chaetotaxy: 1 *h*, 2 *np*, 1 *prsut*, 0 + 3 *dc*, 2 *sa*, 1 *pa*, 1 *prsc*, 2 *sc*, 1 *mp*, 2 *st* pairs of bristles. All tibiae with dorsal preapicals. Wings with m_x more than 2.0. ♂ abdomen (Fig. 38) with short hypopygium and surstyli, gonites, hypandrium and phallus simple, no more genital appendages. Female abdomen with very short 8th and 9th segments.

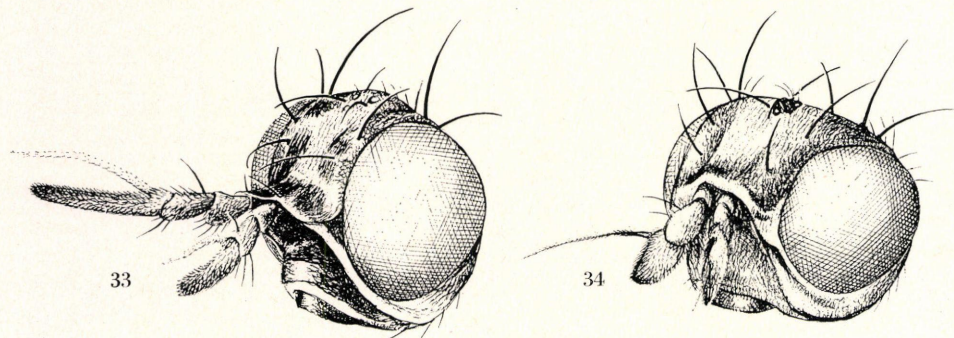
Type-species: *Lauxania hyalinata* MEIGEN, 1826: Syst. Besch., 5: 300. Other species included: *S. atripes* (MEIGEN, 1838), *S. atrivena* SHEWELL, 1971 (holotype seen) and *S. pseudovirilis* SHEWELL, 1971 (types seen) in the Palaearctic region and rather many Nearctic *Sapromyza* species.

Schumannimyia subg. n. differs from the nominate subgenus (*Sapromyza*) first of all by the colour of the body and legs, the structure of the fore part of frons and face, and the new subgenus has a comparatively simple male genitalia.

It is my pleasure to name this subgenus in honour of DR. HUBERT SCHUMANN, the curator of the Diptera collection, Zoologisches Museum, Museum für Naturkunde, Berlin.

S. antennata BECKER, 1895:222. — Material studied: 1 ♂, 1 ♀: "Florenz, 54129. V." (BECKER's handwriting), "antennata ♀ Beck." (CZERNY's handwriting), det. CZERNY. Both of them were identified as ♀ but one of them is definitely a ♂.

The type-specimen of *Sapromyza antennata* BECK. is lost (see CZERNY, 1932). CZERNY applied this name obviously to a different species than the type-specimen. Actually, the specimens are con-



Figs. 33–34. Head of 33 = *Lauxania* (*Callixania* subg. n.) *minor* MARTINEK, 34 = *Sapromyza* (*Schumannimyia* subg. n.) *hyalinata* MEIG.

specific with the type-specimen of *S. maculipes* BECK. (see below). (Their abdomen is without transverse bands, third antennal joint is less than twice longer than its width, contrarily to the four times longer third joint as given in the description of *antennata* BECK.). This is why I regard *Sapromyza antennata* BECKER, 1895 to be an unrecognizable species.

S. brunnescens BECKER, 1895; 225, 189, is a new synonym of *Sapromyza albiceps* FALLÉN, 1820 (= *decaspila* LOEW, 1857) (synonymy by COLLIN, 1948); = *octopunctata* v. ROSER, 1840 nec WIEDEMANN, 1830; = *octopunctella* HENDEL, 1908 (as nom. n. for *octopunctata* v. ROSER).

Material studied: det. BECKER: 1 ♀: "Kaltwasser, 11/6, 29451", "*brunnescens* BECK."; 1 ♀: "Polen", "*Brunnescens*"; 1 ♀: "SCHNABL'S S. 36555", "*brunnescens* BECK." (all the above data are in BECKER's handwriting, except for "Polen"). det. CZERNY: 2 ♀: "Austria sup., Almsee, CZERNY" "*Sapromyza 8 punctata* v. ROSER"; 1 ♀: "Austria sup., Kremsm.", "*Sapromyza 8 punctata* v. ROSER".

The colour of the frons, of the third antennal joint and palpi, the position of the anterior *dc* pair, the short t_a-t_p section of the wing wholly agree with COLLIN's description (1948).

S. atechna BECKER, 1895; 211, 185, is a new synonym of *Sapromyza sexpunctata* Meigen, 1830.

Unfortunately, I received a male ("Görz, 40749" — "*atechna* BECKER") (in BECKER's handwriting) instead of the ♀ holotype from the Berlin Museum. This specimen was determined to be, after careful genital preparation, *sexpunctata* MEIG. Though I have not seen the holotype, I am convinced that *atechna* is a synonym of *sexpunctata* (since BECKER was a dipterologist who scarcely knew the species he himself described). His original description differs from *sexpunctata* only by the lack of flacks on tergite 4. The examined male specimen, in fact has a pair of flecks on tergite 4, though it was covered prior genital preparation.

S. chlorophthalma ZETTERSTEDT, 1847 sensu BECKER et CZERNY is conspecific with *Sapromyza apicalis* LOEW, 1847. — **Material studied:** 1 ♂: "*Chlorophthalma* ZETT. ?" — "SCHNABL'S S. 36546" (BECKER's hand-writing), *S. apicalis* LW., det. L. PAPP (by study of genitalia).

CZERNY had not even one specimen of this species; it is also very probable that BECKER had no more than this single specimen above.

S. distichera CZERNY, 1932: 53, is a new synonym of *Sapromyza quadripunctata* (LINNÉ, 1766). — **Material studied:** syntypes: 3 ♀: "Rügen, Sassnitz, CZERNY — 20. 6. 1930" (not 1 ♂, 2 ♀ as given by CZERNY, 1932: 53); 1 ♀: "Rügen, Göhren, CZERNY, 26. 6. 1930"; 1 ♀: "S. Russland, Krim, 26. V. 1899, S. BAZHENOV, "*Sapromyza distichera* CZERNY" det. CZERNY; other material (det. CZERNY): 1 ♀: "Stein a. D. CZERNY, 26/6. 29."

All these specimens have also a pair of small black spots on tergites 5 and 6, although these tergites are covered by the preceding ones, thus, the spots can be seen only from behind. In all probability it was one of the causes, why CZERNY described this common species as new.

S. leningradensis CZERNY, 1932: 56, is an unrecognizable species. — **Material studied:** 3 ♀ syntypes (all types): 1 ♀: "Gouv. Petrograd, Sablino, 27. VI. Stackelberg, 1913" — "*Sapromyza Sapromyza leningradensis* CZERNY" det. CZERNY. 2 ♀: "Саблино, Петроград, 13. VII. 1913, Штапельберг", "*Sapromyza leningradensis* CZERNY" det. CZERNY.

CZERNY gave a short but comparatively good description but unfortunately the type-series consists of females only. It is very near to (or conspecific with) *zetterstedti* HENDEL, 1908. (Body small, arista with short pubescence, a brown spot above neck, anterior *dc* very short, 4 rows of acrosticals). The differentiating character given in the description namely, that *zetterstedti* has not a pair of dark spots on tergite 4, is a very dubious feature.

S. maculipes BECKER, 1907: 383, is a possible synonym of *Sapromyza sordida* HALIDAY, 1833. — **Material studied:** 1 syntype ♂: "Riva, 10/5. 41572" — "*maculipes* BECK." (BECKER's hand-writing).

COLLIN (1948: 234-235) described both the ♀ and ♂ genitalia of *sordida* HAL. His descriptions fit the above type-specimen and to the specimens of *maculipes* that I have seen. The spot on the ♂ fore femur apically, the 6 rows of acrosticals, the armature of the legs of ♂ also indicate the conspecificity of the two species. It is indispensable to study the types of *sordida* HAL. to make a final decision; which was impossible in the course of the present work.

S. nigrifacies CZERNY, 1932: 48, 63, is a new synonym of *Sapromyza opaca* BECKER, 1895. — **Material studied:** holotype ♀ (Zoological Institute, Leningrad): «Юукки, Петроград, 10. VIII. 928, Штапельберг» — "*Sapromyza nigrifacies* ♀ CZERNY" det. CZERNY.

It is quite incomprehensible why CZERNY described a partly rotten and subsequently discoloured specimen to be new. At a certain incidence of light the pairs of flecks on tergite 4, 5 and 6 are readily perceptible; ocellar setae broken off but insertion points standing close to one another. Arista with

comparatively long pile, indicating identity with *opaca*, shape and setal formula of sternite 8 definitely prove that this specimen is conspecific with *opaca* BECK.

S. pellucida BECKER, 1895: 234, 191, is a new synonym of *Sapromyza sexpunctata* MEIGEN, 1830. — **Material studied**: 2 syntype ♀ (no more type-specimens were found in the collection of the Zoological Museum, Berlin): "Görtz, 2/VI." "*pellucida* BECK." (on one of them) "SCHNABE's S. 36554" (on the other) "Polen".

Frons as dull as in *sexpunctata*, also orbitalia quite the same, the structure of the head, the length of acrosticals, wing venation and postabdominal sclerites are likewise identical with *sexpunctata* females.

The specimens, which Mrs. E. REMM collected in the Baltic republics of the USSR, belong to a new species (see REMM 1978, cf. REMM 1972).

S. quadricincta BECKER, 1895: 234, 191, is a new synonym of *Sapromyza bipunctata* MEIGEN, 1830. — **Material studied**: holotype ♂: "Herculesbad, 8. 6. 871", 11612, "Coll. H. LOEW", "*quadricincta* BECKER" (latter label with BECKER's hand-writing).

Synonymy is established by studying the ♂ genitalia.

S. rabdota BECKER, 1895: 212, 185, is a new synonym of *Sapromyza bisigillata* RONDANI, 1866. — **Material studied**: holotype ♀: "Triest, 5/6. 40740" — Typus — "*Rabdota* BECK." (BECKER's hand-writing).

The used features in distinguishing (BECKER 1895:185) it from *bisigillata* are all variable: holotype possessing only one pair of *st* seta. Though I have found a specimen (Poros, Krüper) determined by KERTÉSZ as *bisigillata* ROND. which had on the right side one strong and one thin *st*, on the left side only one *st* seta; the other specimen collected alongside with it had 2 pairs of strong *st* seta. The feature that the apex of the third antennal joint of *bisigillata* is brownish, while the same of *rabdota* entirely yellow, again are unstable. Finally, the two parallel brown bands on the thorax are difficult to perceive both on the holotype of *rabdota* and also on other specimens examined by me; further, BECKER described *bisigillata* without bands, while *rabdota* with bands, on the other hand, CZERNY (1932: 47) said the exact opposite. As far as the vein portion t_a-t_b of *bisigillata* ROND. is concerned ($m_x = 2.0$), I believe RONDANI was, as he was in several other instances too, somewhat doing it on the large scale, almost superficial when giving comparative characteristics. Thus, although I had not the opportunity to examine the holotype of *bisigillata* (it is not included in RONDANI's collection, thus, its whereabouts is unknown) still I consider *rabdota* BECKER, 1895 to be a new synonym of *bisigillata* RONDANI, 1868.

S. setiventris ZETTERSTEDT, 1847, sensu BECKER, and CZERNY is conspecific with *Sapromyza apicalis* LOEW, 1847. — **Material studied**: several specimens identified by BECKER and CZERNY.

By genitalia preparation it was proved not only the above statement but also the fact that the specimens of *apicalis* LW. may have completely yellow palpi. BECKER did not know the type of ZETTERSTEDT, he identified the specimens (mainly ♀ ♀) on the basis of the original description, which had very long bristles on the abdomen, partly black third antennal joint and not black palpi, as *setiventris* ZETT. CZERNY accepted BECKER's opinion without changes.

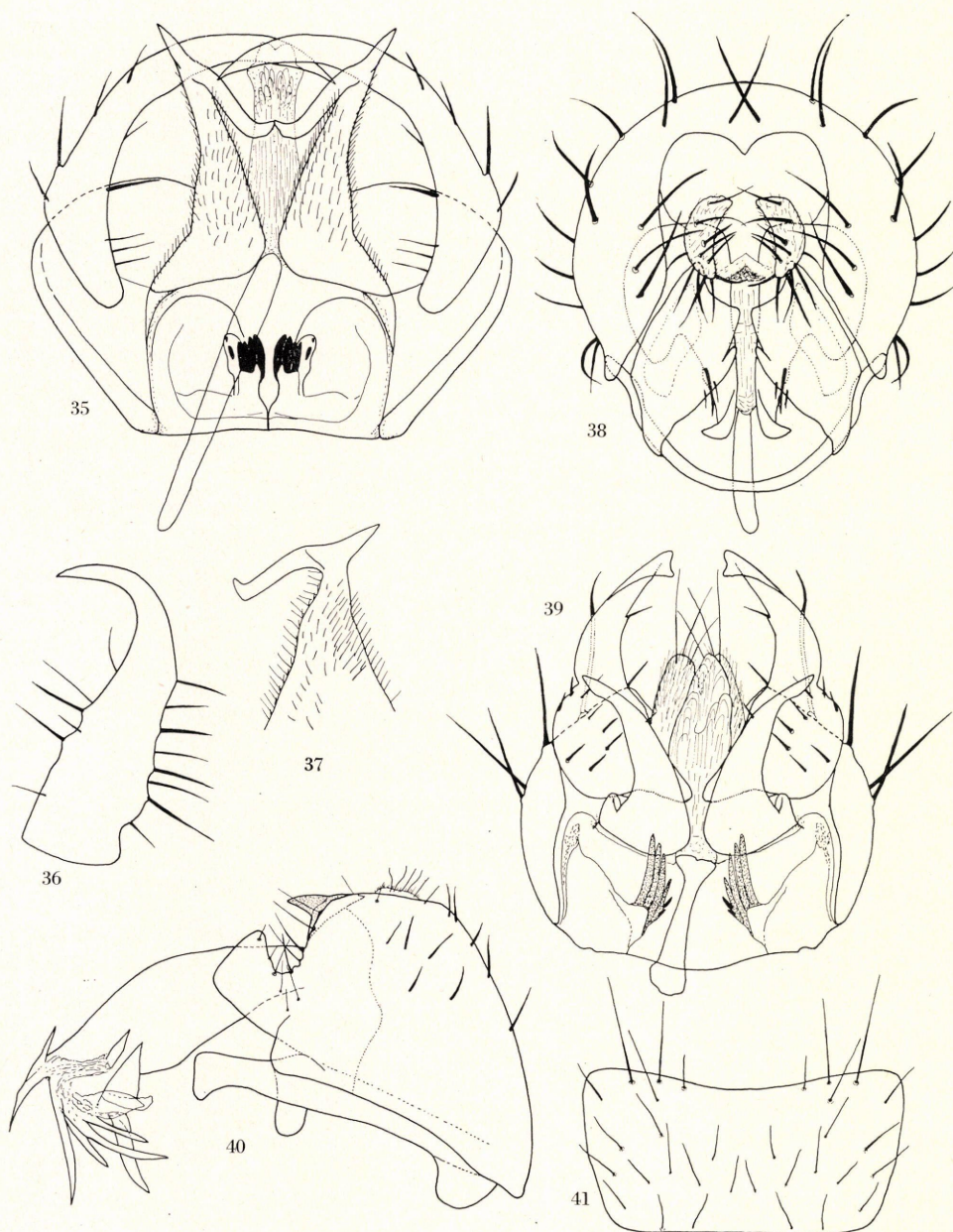
Lauxania LATREILLE, 1804

Callixania subg. n. (Figs. 33, 40)

Head 1.35 times higher than long, anterior part of frons strongly concave, base of antennae strongly protruding (Fig. 33). Upper 3/5 of facial plate convex. Anterior *ors* proclinate and inclinate, posterior *ors* reclinate and exclinate. First antennal joint not longer than second. Third antennal joint less than twice longer than two basal joint combined. $0+2\ dc$ pairs. No dorsal preapicals on mid and hind tibiae. Wings yellow, alar base black. Male genitalia (Fig. 40) very characteristic and differing completely from those of the species of *Calliopum* STRAND and of *Lauxania cylindricornis* (FABR.) (cf. Figs. 35, 39). Surstylus coalescent with hypopygium, a second (posterior) pair of hypopygial processes also present (these latter meet in the sagittal line; dotted part on Fig. 40). Phallus is of a very complicated form (it has 2 median and 7 pairs of lateral appendages). No thick thorns on the ventral base of the genitalia present.

Type-species: *Lauxania minor* MARTINEK, 1974.

Callixania (Calli[opum] + [Lau]xania, feminine) subg. n. differs from the nominate subgenus by the structure of face, the short first antennal joint, the inclinate anterior *ors*



Figs. 35–37. *Calliopum splendidum* sp. n.: 35 = ♂ genitalia in ventral view, 36 = surstylus in profile, 37 = gonite in its biggest extension. — Fig. 38. *Sapromyza* (*Schumannimyia*) *hyalinata* MEIG.: ♂ genitalia in caudal view. — Fig. 39. *Lauxania cylindricornis* FABR.: ♂ genitalia in ventral view. — Fig. 40. *L. (Callixania) minor* MARTINEK: ♂ genitalia in lateral view. — Fig. 41. *Lyciella mihalyii* sp. n.: ♂ pregenital sternite

and by the male genitalia. Some of the body characteristics are similar to those of the species *Calliopum* but the ♂ genitalia are comparatively different (surstyli united with hypopygium, a second pair of hypopygial processes present, phallus is very complex, etc.).

Calliopum STRAND, 1927

C. albomaculatum (STROBL, 1909): 283 (*Lauxania*) — An easily recognizable species, nevertheless needing redescription: Head 1.5 times higher long than, anterior ors inclinate, third antennal joint only 2.5 times longer than 2nd joint dorsally and less than twice longer than its width. Arista pale yellow, antennae dark reddish yellow, only apical two-thirds of third joint dark blackish brown. Genae wide, longest diameter of eyes only 2.43 times longer than smallest genal width. Mesonotum heavily dusted with grey pollen. Only 2 pairs of *dc*. 1 very strong *prsc* pair (equalling anterior *dc*). Acrosticals in about 4 badly arranged rows. Legs mainly black, tarsal joints 1–3 of mid and hind tarsi dark yellowish red. Hind tibia without dorsal preapical bristles. Mesopleuron with 1 very strong posteromedially situated bristle and with some shorter bristles. 2 pairs of *st*. Wings transparent, veins ochreous yellow. $m_x = 1.7$, $t_a - t_p / t_p = 2.0$. Calyptrae fuscous, halteres black with brown stalk. Abdomen subshining with grey pruinosity.

Material studied: 1 ♂: "Austria sup., Kremsmünster, CZERNY", "*Calliopum albomaculatum* STROBL" det. L. CZERNY.

Calliopum splendidum sp. n. (Figs. 35–37)

Shining black species. Arista with short (only 0.05–0.055 mm long) pubescence. Third antennal joint only twice longer than two basal joints combined. Antennae reddish yellow, apex and upper part of third antennal joint brownish. 0+3 *dc* pairs. 1 pair each of stigmatics, mesopleurals and sternopleurals. Acrosticals in 4 distinct rows. Wings yellowish with yellow venis. m_x of holotype: 1.29, of paratype ♀: 1.30. Wing length: holotype ♂: 4.19 mm, paratypes: 4.32, 4.54 mm, width: holotype: 1.67 mm, paratypes: 1.73, 1.76 mm. Fore legs completely black (at most knees lighter). End of mid and hind femora, majority of mid tibia, entire mid and hind tarsi and hind tibia red. Mid tibia on proximal half brown dorsally. Male mid metatarsus ventrally with a black brush of short but thick bristles. Ventral apical part of ♂ hind tibia with a patch of comparatively long and thick, black bristles. ♂ genitalia (Fig. 35) with thick black thorns at ventral base. Surstylus (Fig. 36) wide at base, strongly curved with sharp tip (Fig. 35). Gonites (Fig. 37) bristly with 2 apical processes, the more ventral one curved. Dorsolateral bulbs on ♀ postabdomen ear-like and much smaller than in *C. elisae* (MEIG.). — Body length: holotype: 3.77 mm, paratypes: 3.63, 3.86 mm.

Holotype ♂: "Hungary, Budakeszi, Hársbokorhegy, Tervterület, 1953, VIII. 12., leg. MIHÁLYI". — Paratypes: 1 ♂, 1 ♀: data same (all type-specimens in the HNHM).

Calliopum splendidum sp. n. is similar to *C. elisae* (MEIG.) but it differs by its darker mid tibia, by the ♂ genitalia (smaller hypopygium, shorter surstylus; its gonites have 1 short and straight and 1 long, curved process instead of two long, curved processes of *elisae*) and by the ♀ genitalia (dorsolateral bulbs are ear-like and much smaller).

A partly revised list of the Palaearctic species of *Calliopum* STRAND: *aeneum* (FALLÉN, 1820), *albomaculatum* (STROBL, 1909), *annulatum* (BECKER, 1907)*, *elisae* (MEIGON, 1826), *geniculatum* (FABRICIUS, 1805), *hispanicum* (MIK, 1880)*, *rufipes* (CZERNY, 1932), *simillimum* (COLLIN, 1933), *splendidum* sp. n.

Still doubtful species (in all probability they are synonyms): *atrimanum* (MEIGON, 1826), *atrocoeruleum* (BECKER, 1895)**, *nitens* (LOEW, 1858)**, *nigripes* (MACQUART, 1835), *virtipennis* (MEIGON, 1926).

Several specimens identified by BECKER as *atrocoeruleum* and *nitens* from the collection of the Zoological Museum, Berlin and the Hungarian Natural History Museum were studied and it was found that all of the specimens belong to *elisae* (MEIGON, 1826). As BECKER, who described *atrocoeruleum* and who knew the type of *nitens* of LOEW identified these specimens, it is very probable that both the species are synonymous with *elisae* (MEIGON, 1826). Unfortunately, type-specimens have not been found either in LOEW's or BECKER's collections.

* Type-specimen(s) seen.

** ? syn. of *elisae* (MEIG.).

Palaeartic Lauxaniid species other than listed above, types of which were studied during this research, thus, their validity was confirmed are the following: *Mycterella jovic* KERTÉSZ, 1912, *Peplo-minettia striata* SZILÁDY, 1943, *Eusapromyza balioptera* CZERNY, 1932, *Sapromyza albifacies* CZERNY, 1932, *Sapromyza biordinata* CZERNY, 1932, *Sapromyza obscuripennis* LOEW, 1847, *Sapromyza transcaucasica* CZERNY, 1932.

References

- BECKER, TH. (1895): Dipterologische Studien II. Sapromyzidae. — *Berliner Ent. Ztschr.*, **40**: 171–264.
- BECKER, TH. (1907): Die Ergebnisse meiner dipterologischen Frühjahrserise nach Algier und Tunis. 1906. — *Ztschr. f. Hym. u. Dipt.*, **7**: 369–407.
- COLLIN, J. E. (1948): A short synopsis of the British Sapromyzidae (Diptera). — *Trans. R. Ent. Soc. London*, **99**: 225–242.
- COLLIN, J. E. (1966): A new species of *Minettia* Desvoidy (Diptera, Sapromyzidae). — *Entomologist*, **99**: 144–145.
- CZERNY, L. (1932): 50. Lauxaniidae (Sapromyzidae). — In: E. LINDNER: *Die Fliegen der palaearktischen Region*, **5** (2): 1–76.
- HENNIG, W. (1948): Beiträge zur Kenntnis des Kopulationsapparates und der Systematik der Acalyptraten IV. Lonchaeidae und Lauxaniidae. — *Acta Zool. Lilloana*, **6**: 330–429.
- HENNIG, W. (1951): Neue Acalyptraten aus Europa und Südafrika (Diptera: Piophilidae, Helomyzidae, Lauxaniidae). — *Beitr. Ent.*, **1**: 70–76.
- KERTÉSZ, K. (1921): A Magyar Birodalom legyeinek synopsisa (The synopsis of Diptera in Hungary), I. Lauxaniidae. — *Math. Term. Tud. Ért.*, **38**: 352–359.
- MARTINEK, V. (1974): New European species *Lauxania minor* sp. n. and redescription of species *Lauxania cylindricornis* (Fabr.) (Diptera, Lauxaniidae). — *Biológia SAV* (Bratislava), **29** (8): 609–617.
- PAPP, L. (1979): Lauxaniidae — Chamaemyiidae. — In: *Fauna Hungariae*, Akadémiai Kiadó, Budapest, **5** (4): in print.
- REMM, E. (1972): On the fauna of the Lauxaniidae (Diptera) of the Soviet Baltic Republics. — *Eesti NSV Tead. Akad. Toim.*, **21** (2): 117–129. (In Russian).
- REMM, E. (1974): Ergänzende Angaben über die Fliegen der Familie Lauxaniidae in Lettland. — *Latvijas Entomologs*, **1**: 21–32. (In Russian).
- REMM, E. (1978): New species and records of the Lauxaniidae (Diptera). — *Eesti NSV Tead. Akad. Toim.*, **27** (3): in print.
- SHEWELL, G. E. (1917): Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. 264: Diptera: Lauxaniidae. — *Stuttg. Beitr. Naturk.*, **224**: 1–12.
- STUCKENBERG, B. R. (1917): A review of the Old World genera of Lauxaniidae (Diptera). — *Ann. Natal Mus.*, **20** (3): 499–610.
- SZILÁDY, Z. (1941): A Magyar Birodalom legyeinek synopsisa. VIII. Lauxaniidae. — *Math. Term. tud. Ért.*, **60**: 913–924.
- SZILÁDY, Z. (1943): Bemerkungen über Cordyluriden und Lauxaniiden (Diptera). — *Ann. Hist.-nat. Mus. Nat. Hung.*, **36**: 179–184.
- THALHAMMER, J. (1899): Diptera. — In: *Fauna Regni Hungariae*, **3**: 1–76.

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